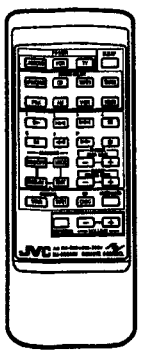
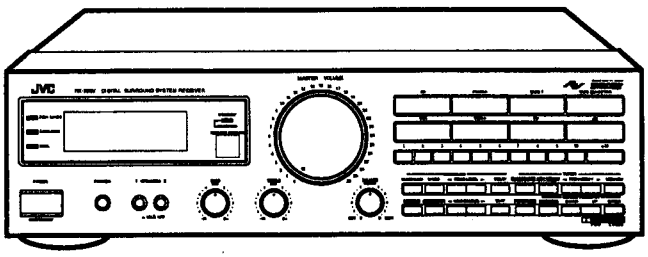
JVC

# INSTRUCTIONS

# RX-509VTN/RX-508VBK

## DIGITAL SURROUND SYSTEM RECEIVER





COMPU LINK
Remote
Control Component

E30580-1926A
[C, U, G, BS, A, EF]

**IMPORTANT** for the U.K.

**DO NOT** cut off the mains plug from this equipment. If the plug fitted is not suitable for the power points in your home or the cable is too short to reach a power point, then obtain an appropriate safety approved extension lead or consult your dealer.

**BE SURE** to replace the fuse only with an identical approved type, as originally fitted.

If nontheless the mains plug is cut off ensure to remove the fuse and dispose of the plug immediately, to avoid a possible shock hazard by inadvertent connection to the mains supply.

If this product is not supplied fitted with a mains plug then follow the instructions given below:

**IMPORTANT.**

**DO NOT** make any connection to the terminal which is marked with the letter E or by the safety earth symbol or coloured green or green-and-yellow.

The wires in the mains lead on this product are coloured in accordance with the following code:

Blue : Neutral
Brown : Live

As these colours may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:

The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.

The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

**IF IN DOUBT - CONSULT A COMPETENT ELECTRICIAN.**

THIS UNIT IS PRODUCED TO COMPLY WITH DIRECTIVE 76/889 EEC.

DIESES GERÄT ENTSPRICHT EG-RICHTLINIE 87/308 EWG.

CET APPAREIL A ETE FABRIQUE POUR ETRE CONFORME A LA DIRECTIVE CEE NUMERO 87/308/CEE.

DIT APPARAAT VOLDOET AAN DE EISEN GESTELD IN DE CEE BEPALING 87/308.

ESTA UNIDAD SE PRODUCE PARA CUMPLIR CON LA DIRECTIVA 87/308/CEE.

CONFORME AL D.M. 13 APRILE 1989 DIRETTIVA CEE/87/308.

## IMPORTANT (CANADA ONLY/CANADA SEULEMENT)

**CAUTION:** TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE

**ATTENTION:** POUR PREVENIR LES CHOCS ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISEE AVEC UN PROLONGATEUR, UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ETRE INSEREES A FOND SANS EN LAISSER AUCUNE PARTIE A DECOUVERT

**IMPORTANT FOR AC OUTLET(S)**

Connect only the audio equipments. Moreover do not connect any equipments which have a power consumption exceeding the value indicated by the AC OUTLET(S).

# ENGLISH

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WARNINGS inside front cover

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# Introduction

Thank you for purchasing the JVC RX-509VTN/RX-508VBK receiver. We hope it will be a valued addition to your audio system. Be sure to read these instructions carefully before installing and operating the receiver.

## Features

- Monitor recording quality
- Remote control
- Sleep timer
- Preset radio stations
- Dolby Pro Logic Surround

## About This Manual

This manual gives you the basic information you need to install and use your receiver. It explains everything you need to know from turning the power switch on to basic troubleshooting. Please consult your JVC dealer if you have further questions about the receiver.

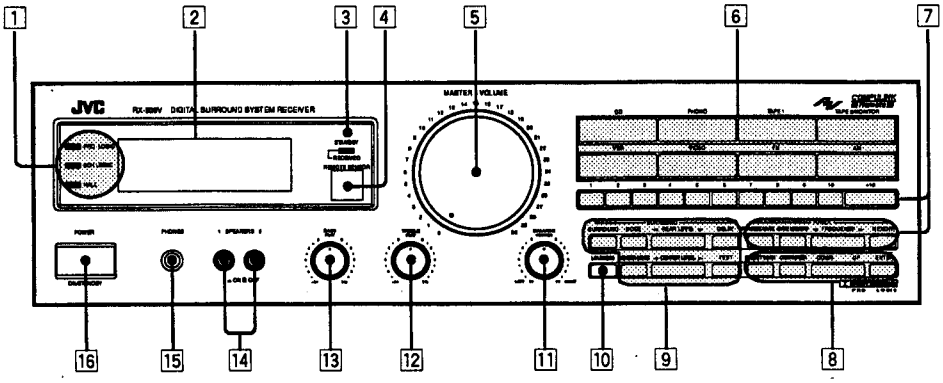
The following conventions are used in this manual:

- Controls, buttons, and connection points on the back of the receiver are indicated with capital letters, like this: POWER button, AUDIO jacks
- Messages that appear in the display window are indicated with capital letters and in quotes, like this: "TUNED"
- Instructions that you need to follow to get the correct results are labeled ***IMPORTANT!***
- Helpful information is labeled ***NOTE:***
- To avoid electric shock to yourself or damage to the receiver, read the information labeled ⚠ **CAUTION!**

This manual covers two models: the RX-509VTN and the RX-508VBK. The RX-508VBK is black in color, while the RX-509VTN is titanium.

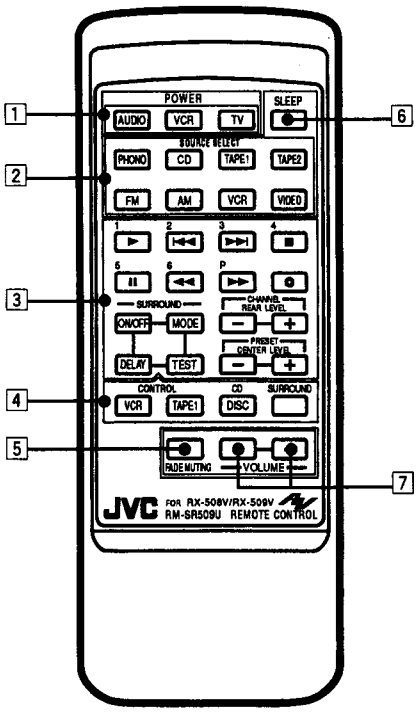
# Switches and Controls

Familiarize yourself with the main switches and controls on your JVC RX-509VTN/RX-508VBK receiver.




## Receiver

1. SURROUND indicator
2. Display window
3. RECEIVED/POWER STANDBY indicator
4. REMOTE SENSOR window
5. MASTER VOLUME control
6. SOURCE SELECT buttons
7. TUNER buttons
8. CHARACTER INPUT buttons
9. SURROUND processor buttons
10. LOUDNESS switch
11. BALANCE control
12. TREBLE control
13. BASS control
14. SPEAKERS buttons
15. PHONES jack
16. POWER switch




## Remote Control

1. POWER switch
2. SOURCE SELECT buttons
3. Buttons for operating components
4. CONTROL buttons
5. FADE MUTING button
6. SLEEP button
7. VOLUME adjuster

# *Installation*

This section explains how to connect the receiver to other stereo equipment and speakers, and how to connect the power supply.

## ⚠ Cautions

### Before Installation

⚠ **CAUTION!** Before installing your receiver:

- Make sure your hands are dry.
- Turn the power off to all components.
- Read the installation instructions for all components you are going to connect.

### Positioning the Receiver

⚠ **CAUTION!**

- Install the receiver in a location that is level and protected from moisture.
- The temperature around the receiver must be between 23° and 104° F (–5° and 40° C).
- Make sure there is good ventilation around the receiver. Poor ventilation could cause overheating and damage the receiver.

### Making Power Connections

⚠ **CAUTION!**

- Do not handle the power cord with wet hands.
- Do not pull on the power cord to unplug the receiver. Always grab the plug directly so as not to damage the cord.

### Handling the Receiver

⚠ **CAUTION!**

- Do not insert any metal object into the receiver.
- Do not disassemble the receiver or remove screws, covers, or cabinet.
- Do not expose the receiver to rain or moisture.

## Connecting Stereo Components

### Before Starting

You can connect the following components to the receiver:

Audio components
- Turntable
- CD player
- Two tape decks

Video components
- VCR
- Video disc player
- TV

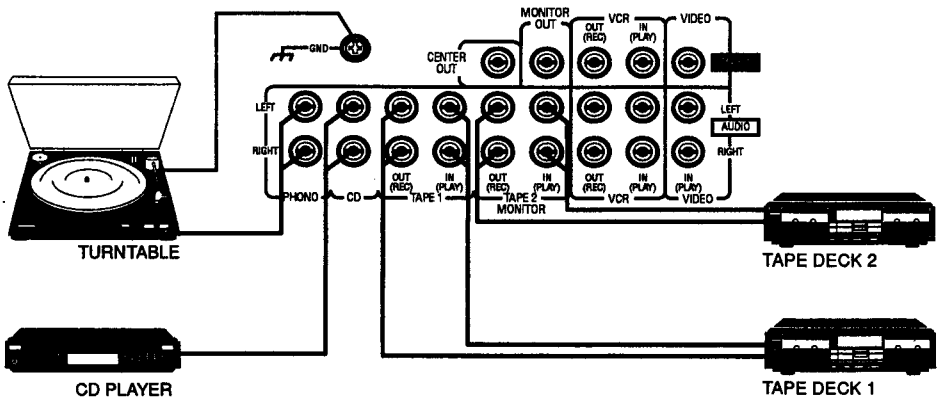
***IMPORTANT!*** *The left channel of any audio component must be connected to the left-channel jack of the receiver, and the right channel to the right-channel jack. If they are reversed, the stereophonic image will not be correct.*

***NOTE:*** *To ensure correct connections, insert the red plug into the right channel.*

### Basic Connections for Audio Equipment

Connect stereo components to the amplifier using cables with RCA PIN plugs. If you are connecting a tape deck, connect the output jacks on the tape deck to the jacks marked IN (PLAY) on the receiver, and the input jacks to those marked OUT (REC).

***NOTES:***
- *Any turntables incorporating a small-output cartridge such as an MC (moving-coil type) must be connected to this amplifier through a commercial head amplifier or step-up transformer. Direct connection may result in insufficient volume.*
- *If a ground cable is fitted to your turntable, connect the cable to the screw marked GND on the rear panel.*



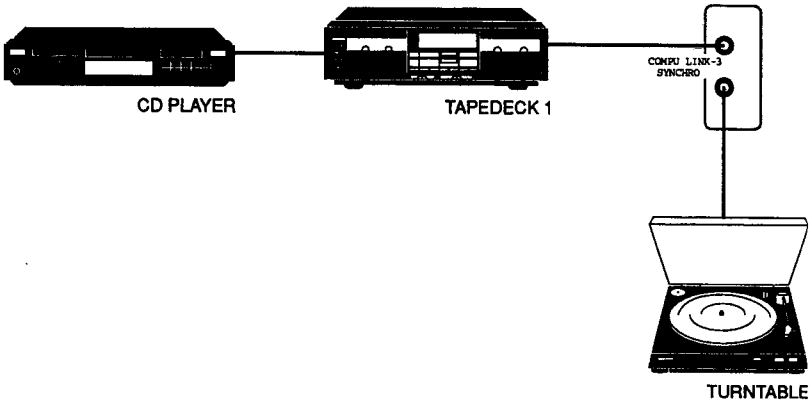
## COMPU LINK-3 Connections

COMPU LINK-3 SYNCHRO jacks on the back of the receiver connect the COMPU LINK remote control system. This system connects other JVC audio components with the receiver to make listening and recording more convenient. To use this system, attach the cables provided with your JVC components to the COMPU LINK-3 SYNCHRO jacks on the rear panel of each component. Then connect the cables to the receiver.

*NOTES:*

- *COMPU LINK-3 is an upgraded version of COMPU LINK-1. If your equipment provides COMPU LINK-1 jacks, you can still connect your equipment, but slight imperfections may result. Automatic Power ON/OFF, for example, may not always function properly.*
- *Refer to page 24 for details about the COMPU LINK remote control system.*

⚠ **CAUTION!** Do not connect Tape Deck 2 to the COMPU LINK jacks. It may cause the COMPU LINK system to malfunction.

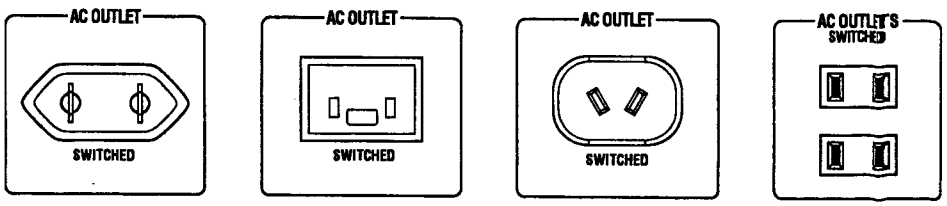



## Other Audio Connections

Use the socket on the back of the receiver to connect the power supply of any audio components. By pressing the POWER switch on the remote control, you can turn the receiver, and all connected components, on or off at the same time.

⚠ **CAUTION!** Do not connect any components that consume more power than the capacity of the AC outlet. This capacity is indicated below the socket on the back of the receiver.

***IMPORTANT!*** *Do not use the AC outlet on the receiver to connect the power supply of the COMPU LINK component. Otherwise the COMPU LINK remote control system may not work correctly.*

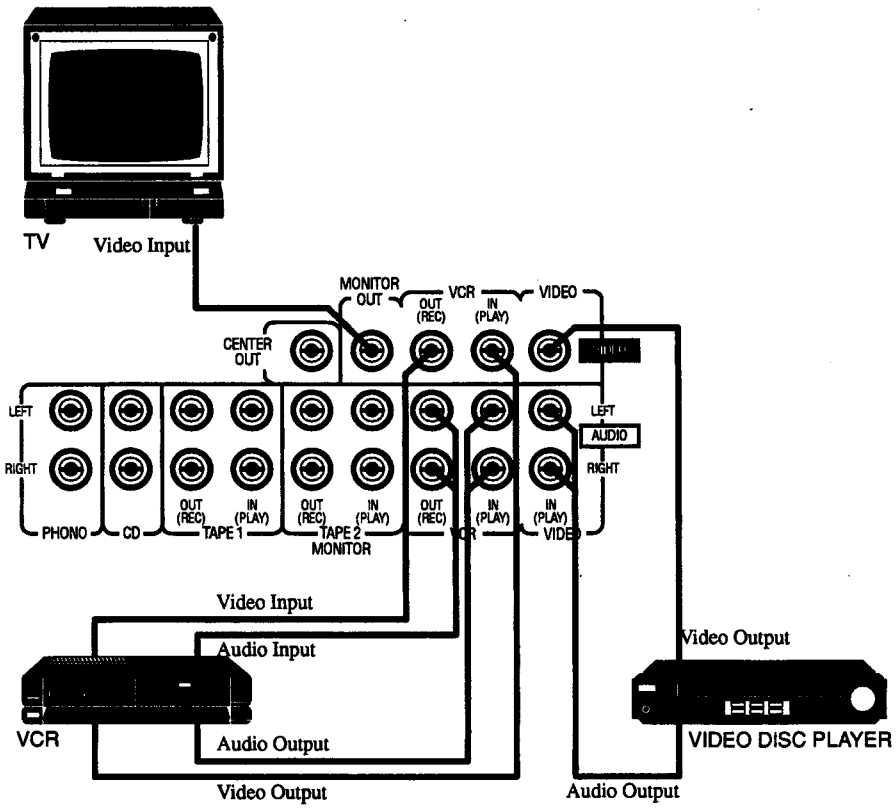



For continental Europe | For the U.K. | For Australia | For other areas

## Basic Connections for Video Components

Connect the audio signal jacks of your video components to the AUDIO jacks on the receiver. Connect the video signal (composite) jacks to the VIDEO jacks. If you are connecting a VCR, connect the output jacks on the VCR to the jacks marked IN (PLAY) on the receiver, and the input jacks to those marked OUT (REC).

*NOTE: Keep the connecting cables for your TV, VCR, and antenna away from the power cord leading from the back of the receiver. The power cord may cause noise or screen interference. We recommend that you use coaxial cable to connect the antenna, since it is well-shielded against interference.*



## Connecting Speakers

### Before Starting

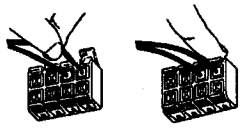
You can connect the following combinations of speakers:

- two pairs of front speakers to produce normal stereo sound
- one pair of rear speakers to produce the surround sound effect
- one center speaker for more effective surround sound

⚠ **CAUTION!** Use speakers with the impedance marked near the terminals.

### Connecting Speakers

To connect each speaker, follow these steps:



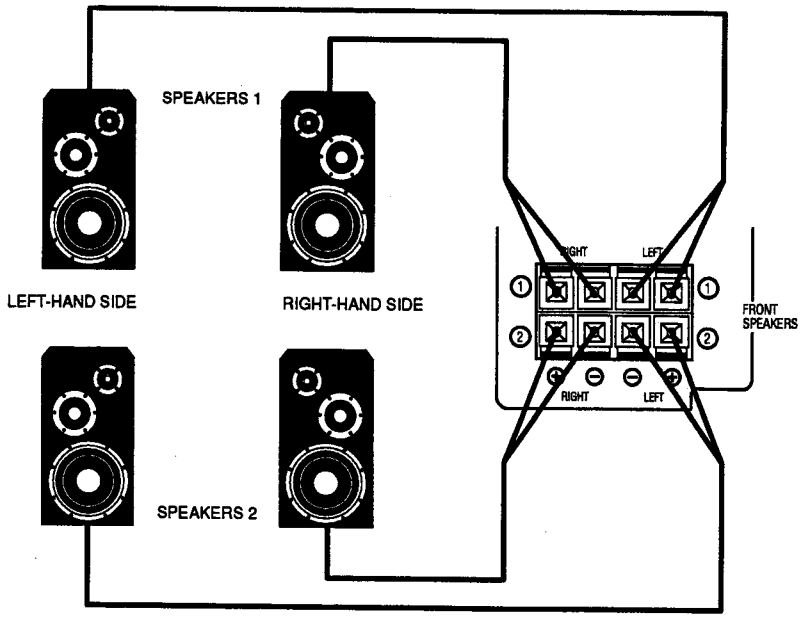
**Step 1** Open each terminal on the back of the receiver and insert the end of the speaker wire, as shown.

**Step 2** Close the terminals to clamp the speaker wires in place, as shown.

*NOTE: Use the wire supplied with the speakers.*

### Connecting the Front Speakers

Connect the front speakers to the FRONT SPEAKERS terminals. Up to two sets of front speakers can be connected.




***IMPORTANT!*** *Be sure to match the polarity of the speaker terminals with the polarity of the terminals on the receiver, (+) to (+) and (-) to (-).*

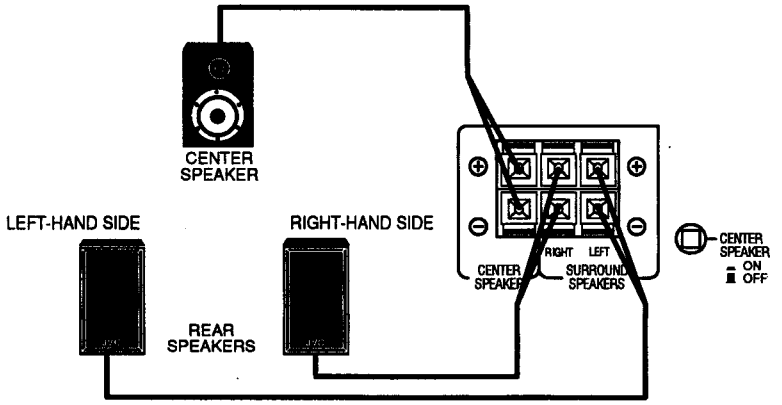
## Connecting the Rear Speakers and Center Speakers

Connect the rear speakers to the SURROUND SPEAKERS terminals. Connect the center speaker to the CENTER SPEAKER terminals.

***IMPORTANT!*** *Check the position of the CENTER SPEAKER switch on the back of the receiver. When the center speaker is connected to the receiver, set the switch to the "in" position (▬). When no center speaker is connected to the CENTER SPEAKER terminals, set the switch to the "out" position (▮). If the switch is in the wrong position, either you will hear no sound from the center speaker, or you will get an incorrect sound effect.*

⚠ **CAUTION!** You must turn the POWER switch OFF before setting the CENTER SPEAKER switch either "in" or "out".

***IMPORTANT!*** *When the CENTER SPEAKER switch is set to the "in" (▬) position,* make sure that both rear speakers are connected. Otherwise, you will hear no sound from the rear speakers.




*NOTE: It is recommended that you use an antimagnetic speaker for the center speaker. Position the center speaker near the TV monitor.*

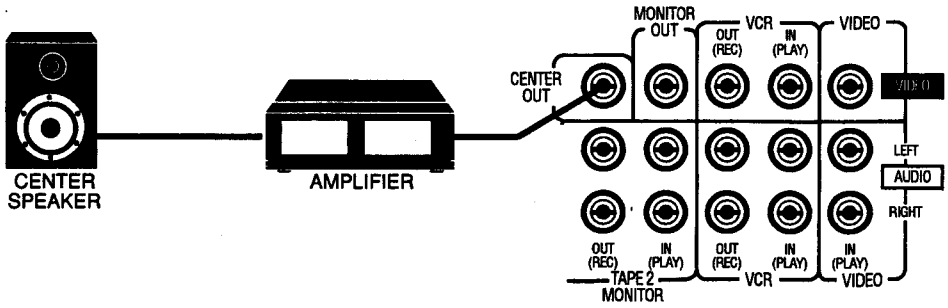
## Increasing Power for the Center Speaker

To increase power for the center speaker, you can use a separate amplifier.

**Step 1** Connect the input terminals of the power amplifier to the CENTER OUT terminal on the back of the receiver.

**Step 2** Connect the center speaker to the speaker terminals of the connected amplifier.

***IMPORTANT!*** *Make sure the CENTER SPEAKER switch is in the "out" position (▮).*



## Connecting an AM Antenna

**Before Starting**

One AM loop antenna is supplied with your receiver.

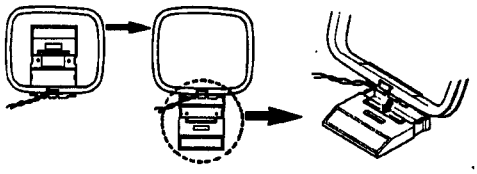
**Basic Connections**

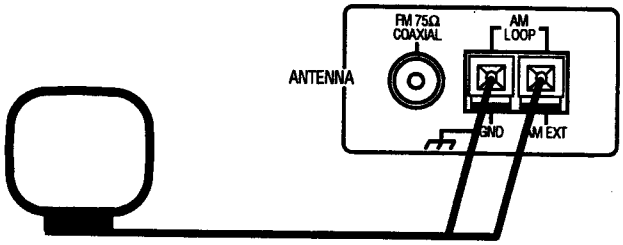
To connect the AM loop antenna to the AM LOOP terminals, follow these steps:

**Step 1** Open each terminal and insert one of the two ends of the AM antenna wire.

**Step 2** Close the terminals to clamp the antenna wires in place.

**Step 3** Stand the AM loop antenna on its own base, as shown. Set it on any flat surface.





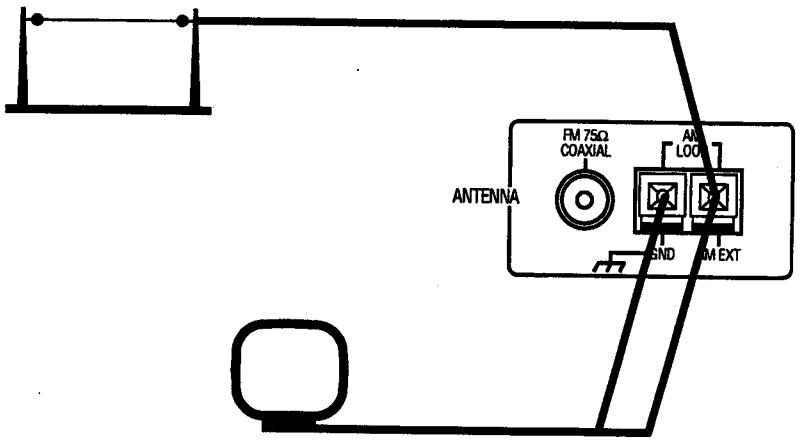

**AM Outdoor Antenna**

If your AM broadcast reception is unsatisfactory, you should connect an AM outdoor antenna in addition to the loop antenna. The antenna wire should be 16 to 40 feet (5 to 13 meters) long.

Connect one end of the outdoor single vinyl-covered antenna wire to the AM LOOP terminal marked AM EXT.

***IMPORTANT!*** *The AM loop antenna must be installed to receive AM broadcasts. Do not disconnect the loop antenna when installing an outdoor antenna.*

***IMPORTANT!*** *Except for the connection, make sure no uninsulated antenna wire touches the rear panel of the receiver. Otherwise, the receiver might not pick up AM broadcasts.*



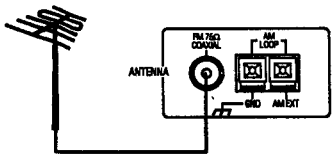
## Connecting an FM Antenna

### Before Starting

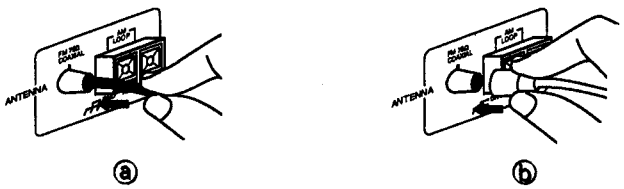
The type of terminal provided for connecting an FM antenna depends on your geographic area. Read the section below which corresponds to your area.

***IMPORTANT!*** *Make sure the antenna conductors do not touch any other terminals on the receiver. This could cause poor reception.*

### For Germany

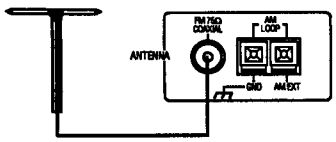



You have two options for connecting an FM antenna. Connect the included wire antenna as shown in option ⓐ, or purchase antenna and cable with connector DIN 45332 and attach as shown in option ⓑ.



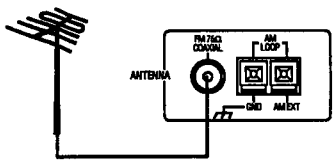

ⓐ ⓑ

### For Other European Countries




Connect the antenna cable to the FM 75Ω COAXIAL terminal using the matching transformer. You have two options — a 300-ohm feeder cable, or a 75-ohm coaxial cable.

To attach the matching transformer to the 300-ohm feeder cable, secure the two conductors to the screws of the matching transformer, as shown at the left.




To attach the matching transformer to the 75-ohm coaxial cable, follow these steps:

**Step 1** Remove the cover of the matching transformer by lifting the tabs on both sides.

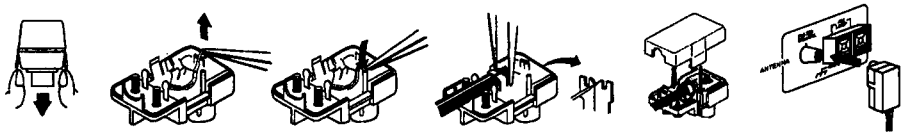
**Step 2** Remove the jumper wire from the notch in the center of the fitting.

**Step 3** Wind the wire securely around the plastic pole next to the fitting.

**Step 4** Insert the center conductor of the coaxial cable into the notch.

**Step 5** Using a pair of pliers, secure the fitting in the center of the matching transformer so that the shield braid of the coaxial cable is held tightly in the fitting.

**Step 6** Snap the cover back onto the matching transformer.

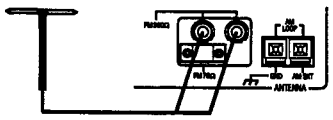


1 2 3 4 5 6

## For Countries Outside Europe

For countries outside Europe, there are two connection types:

To connect a 300-ohm antenna, follow these steps:

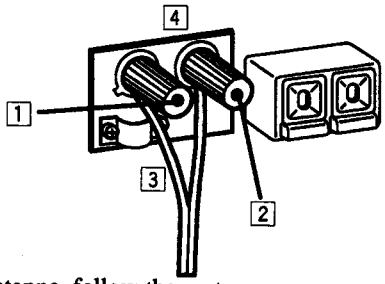


**Step 1** Loosen the cap on the 300/75-ohm terminal on the back of the receiver.

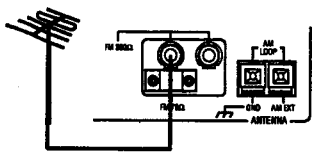
**Step 2** Loosen the cap on the 300-ohm terminal on the back of the receiver.

**Step 3** Connect the antenna by inserting one wire behind each cap.

**Step 4** Tighten the caps on both terminals.



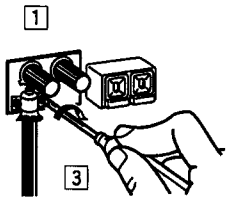

To connect a 75-ohm antenna, follow these steps:

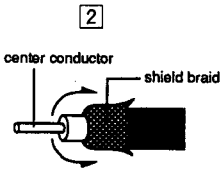


**Step 1** Unscrew the cap and bracket screw on the 300/75-ohm terminal. Insert the round antenna cable from below.

**Step 2** Make sure the shield braid on the cable contacts the bracket, and the center conductor of the cable contacts the 300/75-ohm terminal.

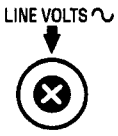
**Step 3** Tighten the bracket screw and the cap on the 300/75-ohm terminal.

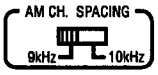


## Connecting the Power

### Before Starting




In some areas, you will find voltage selector and AM channel spacing selector switches on the back of the receiver. If your receiver has these switches, follow the instructions below to set them before connecting the power.

**Voltage Selector:** Using a Philips screwdriver, adjust the voltage selector to the correct supply voltage for your area.

**AM Channel Spacing Selector:** Using the tip of a ballpoint pen, adjust the AM channel spacing for your area.

### Connecting the Power Supply

After checking all connections, insert the power cord plug into an outlet.

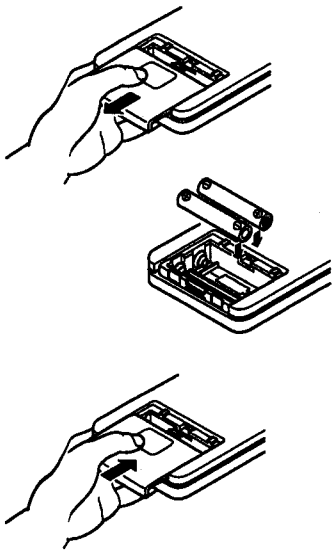
When the power supply is connected correctly, the POWER STANDBY indicator lights on the front of the receiver. A small amount of power (5 watts) is consumed under these conditions, even if the receiver is turned off. To shut off the power completely, unplug the power cord from the outlet.

⚠ **CAUTION!**

- Do not handle the power cord with wet hands.
- Do not pull on the power cord to unplug the receiver. Always grasp the plug directly so as not to damage the cord.
- Do not plug the power cord into a socket until all components are connected correctly.

***IMPORTANT!*** *If the power cord is disconnected or a power failure occurs, the receiver settings in memory are retained for 2 or 3 days.*

### Inserting Batteries into the Remote Control



The remote control requires two batteries (supplied). To insert batteries, follow these steps:

**Step 1** On the back side of the remote control, press down on the battery cover and slide it out.

**Step 2** Insert batteries. Make sure to observe the proper polarity: (+) to (+) and (–) to (–).

**Step 3** Slide the cover in.

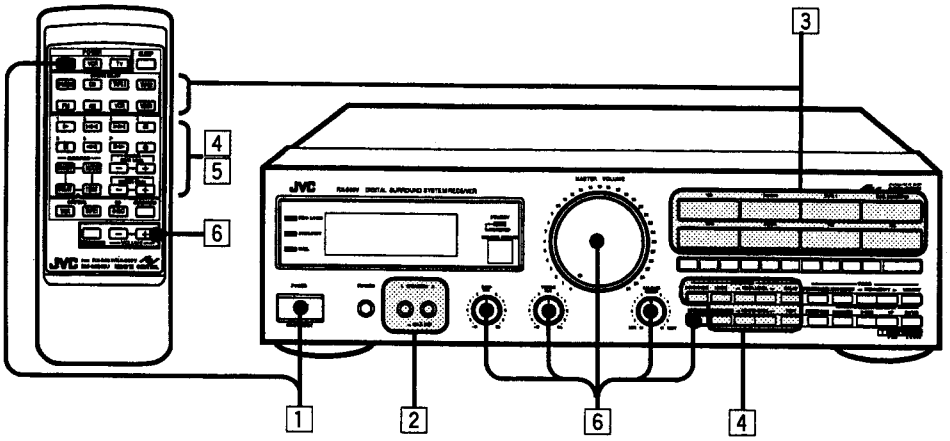
If the range or effectiveness of the remote control decreases, replace the batteries. Use two (2) AAA (24F) dry-cell batteries of the R03/UM-4 type.

⚠ **CAUTION!** Follow these precautions to avoid leaking or cracking cells:

- Place batteries in the remote control so they match the polarity indicated: (+) to (+) and (–) to (–).
- Use the correct type of batteries. Batteries that look similar may differ in voltage.
- Always replace both batteries at the same time.
- Do not expose batteries to heat or flame.

# Operation Outline

## Basic Operation Reference




**1 Turn on the power**

Push the POWER switch to turn on the receiver. The display lights:

*NOTE: Pushing the POWER switch again turns off the power and lights the STANDBY light.*

**2 Select speakers (page 19)**

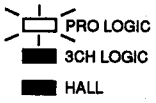
Use the SPEAKERS switch to choose between the two sets of speakers. To use your headphones, insert the headphone plug into the PHONES jack on the receiver.

**3 Choose an audio source (page 14)**

To choose an audio source, press one of the SOURCE SELECT buttons on the receiver, or press one of the SOURCE SELECT buttons on the remote control.

**4 Turn the surround sound effect on or off (pages 21-23)**

To turn the surround sound effect on or off, press the SURROUND button. When the surround processor is activated, one of the effect program indicators (PRO LOGIC, 3CH LOGIC, or HALL) lights up.




**5 Operate the audio source (pages 24-26)**

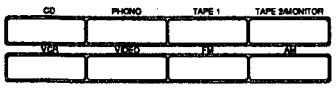
Refer to the manual provided with each component. If your JVC components are connected to the COMPU LINK jack of the receiver, you can operate them using the remote control.

**6 Adjust volume and tone (pages 19-20)**

Rotate the MASTER VOLUME control on the receiver or press the VOLUME button on the remote control to adjust volume. See pages 19-20 for other ways to change the volume or tone.

# Selecting the Source

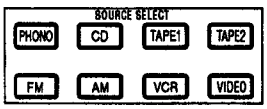
## Listening or Viewing




Press one of the SOURCE SELECT buttons on the receiver or the remote control.

| | |
|---|---|
| CD* | Listen to the CD player. |
| PHONO* | Listen to a record. |
| TAPE 1* | Listen to the tape deck connected to the TAPE 1 jacks. |
| TAPE 2 MONITOR | Listen to the tape deck connected to the TAPE 2 jacks. |
| VCR | View a TV program or pre-recorded video tape. |
| VIDEO | View a video disc. |
| FM* | Listen to an FM broadcast. |
| AM* | Listen to an AM broadcast. |

***IMPORTANT!*** *The TAPE 2 MONITOR button has a different function from other source selector buttons, because it allows you to monitor the quality of the recording. For more details, see Monitoring below.*




**NOTE: On the remote, when you press one of the SOURCE SELECT buttons marked above with an asterisk, the receiver automatically turns ON (even if it was OFF before).*

## Recording

The source being played is automatically selected as the source to be recorded. While recording, you can listen to the selected source at any desired volume and tone settings.

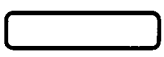
*NOTE: Volume and Tone adjustments and the surround sound effect do not affect recording.*

***IMPORTANT!*** *When recording from TAPE 2 to TAPE 1, press the TAPE 2 MONITOR button and another button other than TAPE 1.*

### Monitoring

Using the Monitor feature, you can compare the sound quality of the source to the sound quality of the recording being made.

To use the Monitor feature while recording onto a cassette deck connected to the TAPE 2 jacks, follow these steps:




**Step 1** Press the TAPE 2 MONITOR button.

The "TAPE 2 MONITOR" light appears and you can listen to the sound of the cassette deck connected to the TAPE 2 jacks. You are now hearing the quality of the recording, not the quality of the source.

**Step 2** Press the TAPE 2 MONITOR button again.

This turns off the "TAPE 2 MONITOR" light, and the speakers play the previously selected source.

*NOTE: If the cassette deck has three heads, you can hear the sound of the recording at the same time as it records on the tape.*

# Receiving an AM/FM Broadcast

To receive an AM/FM broadcast, select either AM or FM using the AM button or FM button. Then tune to the precise frequency using the FREQUENCY buttons.

## Tuning

< FREQUENCY >

Tune to the frequency of a desired station using the FREQUENCY buttons. Pressing the right button increases the frequency, and pressing the left button decreases the frequency. Tapping the FREQUENCY button once changes the frequency in steps.

On the model that can receive LW (Long-Wave) broadcasts, AM tuning will skip to the lower limit of the MW (Middle-Wave) frequencies when it reaches the upper limit of the LW frequencies, and vice versa.

There are two tuning modes: Manual and Automatic.

### Manual Tuning

If you know the frequency of a desired station, hold down the FREQUENCY button to start the frequency changing quickly. Release the FREQUENCY button near the desired station and tap it repeatedly until you arrive at the correct frequency.

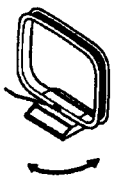
### Automatic Tuning

If you want to scan frequencies for a desired station, hold down the FREQUENCY button to start the frequency changing quickly. When you release the FREQUENCY button, the frequency continues to change until it reaches a station.

When a station is correctly tuned, the "TUNED" light appears on the display window.

Once a tuned frequency is preset, it can be directly recalled using the TUNER buttons. For details, see pages 16-17.

*NOTE: When you use automatic tuning, weak stations are ignored. To pick up weak stations, use manual tuning.*



***IMPORTANT!** If the receiver is tuned to a station but the "TUNED" light does not appear, try rotating the antenna for better reception.*

## Selecting an FM Reception Mode

FM MODE/MUTE

Pressing the FM MODE/MUTE switch switches between these modes.

The "MUTE-AUTO" light appears in the display window. You hear either stereo sound or monaural sound, depending on the broadcast. If it is a stereo broadcast, the "STEREO" light appears. This mode is also useful for suppressing static "noise" between stations.

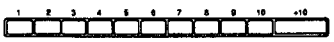
The "MUTE-AUTO" light disappears. You hear monaural sound even if a broadcast is in stereo. This mode is also useful when a stereo broadcast is noisy because of a weak signal.

*NOTE: Using the Automatic Tuning mode, the sound of a broadcast with a weak signal may be muted. In this case, select the monaural mode.*

## Presetting Tuned Frequencies

You can preset up to 40 radio stations by assigning channel numbers (1 through 40) to them. Once a station is preset, you can listen to it by entering the preset number using the TUNER buttons on the receiver, or the PRESET buttons of the remote. There are two ways to preset: manual or automatic.

### Assigning Channel Numbers



To choose numbers from 1 through 10, press the appropriate TUNER buttons. To choose numbers from 11 through 40, press the +10 key and one other button. For example:

| | |
|---|---|
| To choose 17 | Press +10, then 7. |
| To choose 20 | Press +10, then 10. |
| To choose 25 | Press +10 twice, then 5. |
| To choose 40 | Press +10 three times, then 10. |

Your channel number will appear.

*NOTE: You can also tune using the remote control. First press the AM or FM button on the remote, then enter the channel number using the PRESET buttons (+ and –) on the remote. Press + to increase the selected number, and press – to lower the selected number.*

### Manual Presetting

To use manual presetting to assign channel numbers to your favorite stations, follow these steps:

**Step 1** Tune to a station. If necessary, follow the procedure on page 15.

**Step 2** Press the MEMORY button.

The "MEMORY" light appears in the display window.

**Step 3** Using the TUNER buttons, enter a number (1 through 40). This number is the channel number you are assigning to the station.

***IMPORTANT!*** *You must enter the channel number while the "MEMORY" light is on. You have about 5 seconds to do this. If the light disappears before you enter the channel number, press the MEMORY button again.*

**Step 4** When the MEMORY light disappears and the channel number is displayed, presetting is completed.

## Automatic Presetting

AUTO MEMORY

To use automatic presetting to preset up to 40 stations automatically, follow these steps:

**Step 1** Press the SOURCE selector button to select AM or FM.

**Step 2** Using the TUNING buttons, move to the lowest frequency from which you want scanning to begin.

**Step 3** Press the AUTO MEMORY button.

The "AUTO MEMORY" light appears in the display window.

**Step 4** Using the TUNER buttons, enter a channel number (1 through 40) to the first tuned station. From that point, scanning starts and stations are assigned channel numbers in ascending order.

***IMPORTANT!*** *You must enter the channel number while the "AUTO MEMORY" light appears. If this light disappears before you enter the channel number, press the AUTO MEMORY button again.*

Frequencies are scanned in ascending order. When a station is tuned in, scanning stops and the "TUNED" light and preset number appear. The station is preset about 4 seconds later and the "MEMORY" light appears. If you do not want to preset this station, press the AUTO MEMORY button within 4 seconds. Scanning restarts without presetting that station.

When the MEMORY light disappears, scanning continues until one of the following occurs:

- Another station is tuned in
- The upper limit of the tuning range is reached
- All 40 channel numbers have been assigned

When Auto Presetting is completed, the last preset station is received.

***NOTE:*** *To stop scanning at any time, press either TUNING button once.*

## Searching for a Preset Station

PRESET SCAN

When you lose the preset number of a desired station, use the Preset Scan function to find the station. Follow these steps:

**Step 1** Press the PRESET SCAN button.

The receiver runs upward in sequence through the preset channels. You will hear the sound of each channel for 4 seconds while the corresponding channel number blinks.

**Step 2** When you find the desired station, press the PRESET SCAN button again.

Scanning stops.

***NOTE:*** *Scanning ends when one cycle of 40 channels is completed. The receiver returns to the previous station.*

## Assigning Names to Preset Stations

### Entering Title Characters

You can assign a title of up to four characters (for example, a station name) to each preset station (1-20). When a preset station is called, its title is displayed in the display window along with its channel number.

After selecting the preset channel (1-20), enter title characters as follows:

CHARACTER

**Step 1** Press the CHARACTER button.

The cursor appears at the first character position.

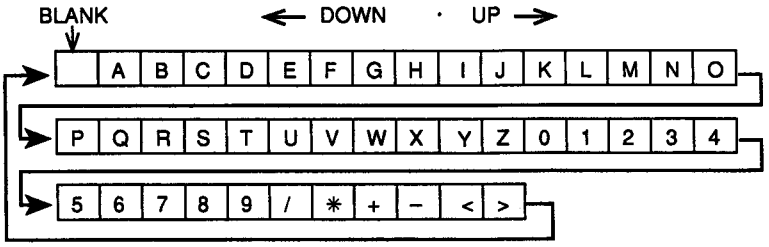
***IMPORTANT!*** *You must press the CHARACTER button while a preseet number appears. You have about 2 seconds to do this. If the display returns to tuning frequencies before you press the CHARACTER button, select the preset channel again.*

If a title has already been assigned, the first character blinks. If you are not changing this character, press the CHARACTER button.

CHARACTOR INPUT
DOWN UP

**Step 2** Using the DOWN and UP buttons, select the character to be entered.

You can choose from the characters shown below. Pressing the DOWN or UP button selects the next character in the sequence.




**Step 3** When the desired character appears, press the CHARACTER button.

The cursor moves to the next character position. You can enter up to four characters by repeating Steps 2 and 3.

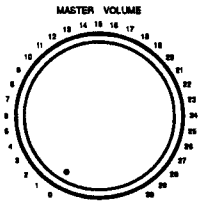
ENTER

**Step 4** Press the ENTER button to save the selected characters.

# Adjusting the Volume and Tone

## Adjusting the Volume

### Using the MASTER VOLUME Control




Use the MASTER VOLUME control to adjust the volume from the left and right speakers. Rotating the dial to the right increases the volume. The volume from the speakers and the headphones increases simultaneously.

*NOTE: Volume can also be adjusted using the remote control. Press the VOLUME button marked + to increase the volume, or the VOLUME button marked – to decrease the volume.*

⚠ **CAUTION!** Listening to extremely loud sound may damage your hearing. Be especially careful when using headphones.

### Muting the Sound

Press the FADE MUTING button on the remote control to decrease the volume easily when you receive a phone call or a visitor.

***IMPORTANT!** If you are listening at very high volume, you may need to press FADE MUTING a second or third time to reduce volume completely.*

### Selecting the Speakers

Pushing in SPEAKER button 1 or 2 activates that pair of speakers. Pressing either button again deactivates that pair of speakers. When the button is in, that pair is activated. You can listen to both pairs, pair 1, pair 2, or neither pair.

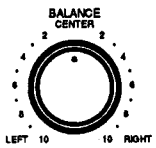
***IMPORTANT!** If only one set of speakers is connected, pressing "in" both speaker buttons will produce no sound.*

### Listening to Headphones

Insert the headphone plug into the PHONES jack. To limit sound to the headphones (no sound from the speakers), press SPEAKER buttons 1 and 2 to deactivate all speakers.

⚠ **CAUTION!** To avoid hearing damage, turn the volume down before plugging in the headphones, then gradually increase the volume.

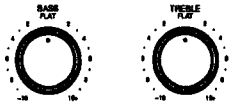
### Adjusting the Left-Right Balance




Use the BALANCE control to adjust the balance between the left and right channels. Rotating the dial to the right increases the right-channel volume, and rotating it to the left increases the left-channel volume. The BALANCE control affects both sets of speakers and the headphones.

## Adjusting the Tone

### Adjusting Bass and Treble



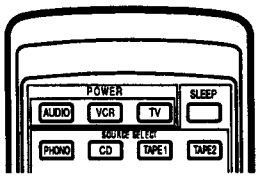
Use the BASS control to adjust low pitches and the TREBLE control to adjust high pitches. Turn either control to the right for intensified pitch. Set both controls at the FLAT position for normal listening.

### Listening at Low Volume

Human ears are not sensitive to low-frequency sounds at low volume. To compensate for this, the loudness function automatically boosts the bass level as you lower the volume.

To use the loudness function, press the LOUDNESS switch. The "LOUDNESS" indicator lights in the display window. Press the switch again to turn the feature off.

## Using the Sleep Timer




The sleep timer lets you listen to any program for up to 80 minutes before it automatically shuts off. The receiver goes back to standby mode (off) after the time period that you specify. To use the sleep timer:

**Step 1** Press the SLEEP button on the remote control.

"SLEEP" appears in the display window.

***IMPORTANT!*** *You have 5 seconds to proceed to the next step. If you wait more than 5 seconds, return to step 1.*

**Step 2** Press the SLEEP button again to set the timer.

Each time you press the SLEEP button, the time limit is extended 10 more minutes. You can set up to 80 minutes.

**Step 3** Stop when you reach the desired time period.

The set time indicator disappears after a few seconds. The receiver will automatically return to standby mode (off) after the time period you specified.

*NOTES:*

- *After setting the sleep timer, you can change sources as often as you wish within the specified time period.*
- *After setting the sleep timer, you can check the remaining time in minutes by pressing the SLEEP button. You can extend the time period further, in 10-minute increments, by pressing the SLEEP button again.*

# *Using the Surround Processor*

The built-in surround processor enables you to enjoy a 3-dimensional sound effect similar to the one you experience in movie theaters.

## Overview

### Types of Sound Effects

The surround sound processor provides three types of sound effects — Dolby Pro Logic Surround, Dolby 3-Channel logic, and JVC's Hall surround — so that you can experiment with a variety of sources and surround sound effects.

***IMPORTANT!*** *The surround processor has no effect on monaural (non-stereo) sources.*

### What is Dolby Pro Logic Surround?

The soundtracks of video software bearing the mark DOLBY SURROUND include the same encoded surround information as found in Dolby Stereo films. The Dolby Pro Logic Surround decoder is a consumer version of the decoding process used in professional Dolby Stereo equipment, and it lets you recreate the theater ambience and effects of Dolby Stereo at home.

Dolby Pro Logic Surround decoder provides these features:

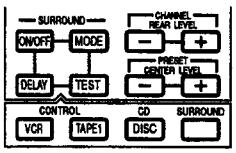
- four primary sound channels – Left, Right, Surround, and additional Center channel
- adaptive matrix to actively derive each channel

The result is that Dolby Pro Logic Surround has the effect of widening the useful listening area and enhancing directional effects, while at the same time locking center channel information onscreen for the home audience.

* *Manufactured under license from Dolby Laboratories Licensing Corporation. Additionally licensed under one or more of the following patents: U.S. number 3,959,590: Canadian numbers 1,004,603 and 1,037,877. "Dolby", "Pro Logic", and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.*

### Turning On or Off the Surround Processor

To operate the surround processor, press the SURROUND button on the receiver. One of the surround program indicators lights. Then press the desired operation buttons.

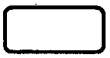



*NOTE: You can also operate the surround processor with the remote control. Press the SURROUND button in the CONTROL section of the remote, then the surround ON/OFF button on the remote. Then press the desired operation buttons.*

## Selecting a Sound Effect

### Selecting a Program

MODE



The surround processor provides three types of sound effects.

"PRO LOGIC" To play a source marked DOLBY SURROUND. The sound will be reproduced through the front speakers, center speaker and rear speakers.

"3CH LOGIC" To play a source marked DOLBY SURROUND when you are not using rear speakers. The sound is reproduced through the front speakers and center speaker.

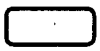
"HALL" To play an ordinary stereo source with one of JVC's surround sound effects, resembling acoustics such as those in a music hall, for example. The sound is reproduced through the front speakers and rear speakers.

To select one of these programs, use the MODE button. Each time you press the button, one of the surround program indicators will light up in the following cycle:

"PRO LOGIC" > "3CH LOGIC" > "HALL" > begins the cycle again

### Selecting a Center Channel Mode

CENTER MODE



When you select PRO LOGIC or 3CH LOGIC program, you must also select a center channel mode. The following modes are available:

"PHANTOM" Use this mode when no center speaker is used. The entire center channel is reproduced through the front speakers. 3CH LOGIC doesn't have this mode.

"NORMAL" Use this mode when the center speaker is smaller than the front speaker. The bass frequencies in the center channel are reproduced through the front speakers.

"WIDE" Use this mode when the center speaker is as large as the front speaker. The entire center channel is reproduced through the center speaker.

"OFF" The center channel is muted.

To select one of these modes, use the CENTER MODE button on the receiver. Each time you press the button, one of the center channel modes will appear in the display window in the following cycle:

"PHANTOM" > "NORMAL" > "WIDE" > "OFF" > begins the cycle again

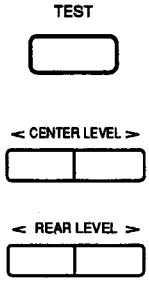
## Adjusting the Surround Sound Effect

The surround processor requires the following two adjustments to produce the maximum surround sound effect:

- center channel level and rear channel level
- delay time

*NOTE: With conventional surround processors, you must adjust the input signal balance. The RX-509TN, however, adjusts this balance automatically. When you set the center mode to "OFF", you can check the effect of this automatic balancing.*

### Adjusting Center Channel Level and Rear Channel Level




After selecting "PRO LOGIC" program, make adjustment as follows:

**Step 1** Press the TEST button.

The test tone will move clockwise from speaker to speaker.

**Step 2** Adjust the center channel level using the CENTER LEVEL buttons. Adjust the rear channel level using the REAR LEVEL buttons.

You can adjust these levels in 2 dB units within a range of ±20 dB. The sound levels of the left and right speakers should be the same.

**Step 3** Press the TEST button.

The test tone will cease.

*NOTES:*

- *If "PHANTOM" is selected as the center channel mode, the CENTER LEVEL button is disabled.*
- *When you are not using rear speakers, you can adjust the center channel level after selecting "3CH LOGIC" program. In this case, the REAR LEVEL button is disabled.*
- *It is covenient to use the remote while sitting in your listening position.*

### Adjusting Delay Time

Use the DELAY TIME buttons to compensate for variations in the distance between your listening position and different sets of speakers. Delay time can be set in 3 steps.

"DELAY-1" When the distance to your surround speakers is greater than the distance to your main speakers.

"DELAY-2" When the distance to your surround speakers is almost equal to the distance to your main speakers.

"DELAY-3" When the distance to your surround speakers is less than the distance to your main speakers.

*NOTE: You can customize the "DELAY TIME" settings for "HALL" program.*

# Operating Source Components

## COMPU LINK Remote Control System

COMPU LINK Remote Control System

The COMPU LINK remote control system lets you operate the receiver and JVC components from the remote supplied with this receiver. Control signals for JVC audio components are preset in the receiver's remote control.

Connecting the COMPU LINK-3 SYNCHRO jacks on the back of the receiver will allow you to use the four functions listed in the left column.

### Remote Control

You can control all components via the REMOTE SENSOR on the receiver using the receiver's remote control. For details, see page 25.

***IMPORTANT!** Point the remote control directly at the REMOTE SENSOR on the receiver.*

### Automatic Source Selection

When you *press play* on a component or the remote, the component begins playing immediately. On the other hand, if you select a *new source* on the receiver or the remote, the component begins playing immediately, but the previously selected source continues playing without sound for a few seconds.

### Synchronized Recording

Synchronized recording means the tape deck starts recording as soon as a CD or record begins playing. To use synchronized recording, follow these steps:

**Step 1** Put a tape in the deck, and a disc in the CD player or on the turntable.

**Step 2** Press the REC and PAUSE button on the tape deck at the same time. This puts the tape deck in the REC/PAUSE state.

***IMPORTANT!** If you do not press the REC button and PAUSE button together, the synchronized recording feature will not operate.*

**Step 3** Press the PLAY button on the CD player or turntable.

As soon as the disc starts playing, the tape deck starts recording. When the disc ends, the tape deck switches back to the REC/PAUSE mode, and stops 4 seconds later.

*NOTES:*

- *During synchronized recording, the CD or PHONO button is activated. Other SOURCE buttons are disabled to prevent recording failure.*
- *If your CD player is operated in the PROGRAM mode, a 4-second mute is recorded between tracks to enable the music scan feature of your tape deck to work.*
- *If the power of any component is shut off during synchronized recording, the system will not operate properly. In this case, you must start again with step 1.*

### Automatic Power ON/OFF

The CD player and cassette deck turn on and off along with the receiver. When you turn on the receiver (using either the remote or the receiver's POWER switch), the CD player or cassette deck will turn on automatically, depending which component was previously selected.

*NOTE: This function has been added to COMPU LINK-3 (Enhanced COMPU LINK), an upgraded version of COMPU LINK-1. Refer to your JVC component manual for details.*

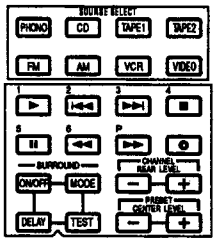
## Using the Remote Control

By connecting the COMPU LINK jack to this receiver, you can operate the audio stereo component with this receiver's remote control. In addition, if your VCR is a JVC product, you can operate it with this receiver's remote control.

*NOTE: The VCR does not work with the COMPU LINK remote control system. When you operate the VCR, you must aim the remote control at the VCR instead of the receiver.*

### Operating the Component Already Selected

Select a source with the SOURCE SELECT buttons on the remote control. Operate that source using the buttons just below the SOURCE SELECT buttons.




***IMPORTANT!*** *If you choose a source on the receiver directly, the remote control will not operate that source. To operate a source with the remote control, the source must be selected using the remote control.*

***IMPORTANT!*** *When you select CD or TAPE 1 on the remote control, the component will turn on and start playing automatically.*

### Turntable

After pressing the PHONO button, you can perform the following operations on the remote:

- ► Starts playing
- ■ Stops playing

### CD Player

After pressing the CD button, you can perform the following operations on the remote:

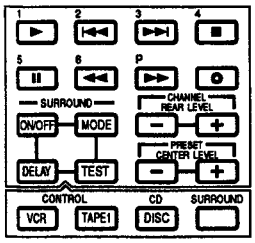
- ► Starts playing
- |◄◄ Skips to the beginning of the previous track
- ►►| Skips to the beginning of the next track
- ■ Stops playing
- II Stops playing temporarily. To release it, press ►
- ◄◄ Moves backward quickly during play
- ►► Moves forward quickly during play

### Cassette Deck

After pressing the TAPE 1 button, you can perform the following operations on the remote:

- ► Starts playback
- |◄◄ Skips to the beginning of the previous tune
- ►►| Skips to the beginning of the next tune
- ■ Stops operation
- II Stops playback or recording temporarily. To release it, press ►
- ◄◄ Fast wind the tape from right to left
- ►► Fast wind the tape from left to right
- o Press together with ► to start recording
  Press together with II to enter record-standby mode

## Operating the Component Not Currently Selected



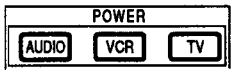

When you want to operate one component while listening to another component (e.g., recording from a CD), use the buttons in the CONTROL section of the remote control. The CONTROL buttons allow you to use the operation buttons for the new component without affecting the component already playing.

## VCR

After pressing VCR (in the CONTROL section of the remote control), you can perform the following operations on the remote:

- ► Starts playback
- ■ Stops operation
- II Stops playback temporarily or freezes the picture. To release it, press ►
- ◄◄ Rewinds video tape
- ►► Fast winds video tape
- o Press together with ► to start recording
  Press together with II to enter record-standby mode
- – + Scans to higher or lower TV channels

*NOTE: You can also turn the VCR and TV on and off by pressing the VCR or TV button in the POWER section of the remote control.*




***IMPORTANT!*** *Aim the remote control at the VCR or TV, not at the receiver.*

## Cassette Deck

Pressing TAPE 1 in the CONTROL section of the remote allows you to perform the same functions as pressing TAPE 1 in the SOURCE SELECT section of the remote.

## CD Player-Changer

After pressing the CD DISC button in the CONTROL section of the remote, you can perform the following operations on the remote:

**1-6, P** Select the number of the disk installed in the CD player-changer. Then continue to operate the CD player as shown on Page 25.

# Troubleshooting

Use this chart to help you solve everyday operational problems. If there is any problem you cannot solve, contact your JVC service center.

| PROBLEM | POSSIBLE CAUSE | SOLUTION |
|---|---|---|
| Display window does not light up | Power cord not plugged in | Plug power cord into AC socket |
| No sound from speakers | Speaker wires not connected | Check speaker wiring and reconnect if necessary |
| | SPEAKERS buttons not set correctly | Push the SPEAKERS buttons in or out as desired |
| | Incorrect SOURCE button was pressed | Select the correct audio source |
| Sound from one speaker only | Speaker wires not connected properly | Check speaker wiring and reconnect if necessary |
| | Balance control is set to one extreme | Adjust BALANCE control so that both speakers have sound |
| Continuous hiss or buzzing during FM reception | Incoming signal is too weak | Adjust antenna |
| | Station is too far away | Select a new station |
| | Incorrect antenna used | Check with your dealer to be sure you have the correct antenna |
| | Antenna not connected properly | Check connections |
| Occasional cracking noise during FM reception | Ignition noise from automobiles | Move the antenna farther from automobile traffic |
| Howling during record playing | Turntable too close to speaker | Move speakers away from turntable |
| Remote control does not work | There is an obstruction in front of the REMOTE SENSOR on the receiver | Remove the obstruction |
| | Batteries are weak | Replace batteries |

# Specifications

## Amplifier

| | |
|---|---|
| **Output Power (Front Channel)** | |
| Canada | 80 watts per channel, min. RMS, both channels driven into 8 ohms from 20 Hz to 20 kHz with no more than 0.06% total harmonic distortion. |
| Europe and Australia | 70 watts per channel, min. RMS, both channels driven into 4 ohms at 1 kHz with no more than 0.9% total harmonic distortion. (IEC 268-3/DIN) |
| Other Countries | 70 watts per channel, min. RMS, both channels driven into 8 ohms at 1 kHz with no more than 0.9% total harmonic distortion. (IEC 268-3/DIN) |
| **Output Power (Center Channel)** | |
| 4-channel operation | 20 watts per channel, min. RMS, both channels driven into 8 ohms at 1KHz, with no more than 0.7% total harmonic distortion |
| 5-channel operation | Total of 10 watts, min. RMS, into 8 ohms at 1KHz, with no more than 0.7% total harmonic distortion |
| **Total Harmonic Distortion (8 ohms, 1 kHz)** | |
| Canada | 0.06 %* at 80 watts output |
| Europe and Australia | 0.06 %* at 50 watts output |
| Other Countries | 0.06 %* at 70 watts output |
| **Intermodulation Distortion** | |
| Canada | 0.06 % at 60 watts output |
| Europe and Australia | 0.06 % at 35 watts output |
| Other Countries | 0.06 % at 50 watts output |
| **Frequency Response** | |
| PHONO (RIAA equalization) | 20 Hz to 20 kHz (±0.5 dB) |
| CD / TAPE 1 / TAPE 2 | 10 Hz to 30 kHz (±1 dB) |
| **Signal-to-Noise Ratio ('66 IHF / '78 IHF/DIN)** | |
| PHONO | 70 dB / 78 dB (REC OUT) / 66 dB |
| CD / TAPE 1 / TAPE 2 | 91 dB / 80 dB / 67 dB |
| **Input Sensitivity / Impedance (1 kHz)** | |
| PHONO | 2.5 mV / 47 k ohms |
| CD / TAPE 1 / TAPE 2 | 250 mV / 47 k ohms |
| **Output Level** | |
| TAPE 1 / TAPE 2 | 250 mV |
| **Tone Control Range** | BASS (at 100 Hz) ±8 dB<br>TREBLE (at 10 kHz) ±8 dB |

## FM Tuner (IHF)

| | |
|---|---|
| **Tuning Range** | 87.5 MHz to 108.0 MHz |
| **Usable Sensitivity** | 10.8 dBf (0.95 µV / 75 ohms) |
| **50 dB Quieting Sensitivity** | |
| Monaural | 16.3 dBf (1.8 µV / 75 ohms) |
| Stereo | 38.3 dBf (22.5 µV / 75 ohms) |
| **Signal-to-Noise Ratio (IHF-A weighted/DIN)** | |
| Monaural | 80 dB at 85 dBf / 72 dB at 85 dBf |
| Stereo | 73 dB at 85 dBf / 64 dB at 85 dBf |
| **Total Harmonic Distortion (IHF/DIN)** | |
| Monaural | 0.15 % at 1 kHz / 0.1% at 1 kHz |
| Stereo | 0.2 % at 1 kHz / 0.3% at 1 kHz |
| **Stereo Separation at REC OUT** | 40 dB at 1 kHz |
| **Capture Ratio (IHF)** | 1.5 dB (10 mV / 300 ohms) |
| **Alternate Channel Selectivity (IHF./DIN)** | 60 dB (±400 kHz) / 55 dB (±300 kHz) |
| **Frequency Response** | 30 Hz to 15 kHz: (+0.5 dB, –3 dB) |

## AM Tuner

| | |
|---|---|
| **Tuning Range** | |
| Canada | 530 kHz to 1,710 kHz |
| U.K. and Continental Europe | 522 kHz to 1,629 kHz (MW)<br>144 kHz to 353 kHz (LW) |
| Australia | 522 kHz to 1,629 kHz |
| Other Countries | 531 kHz to 1,602 kHz / 530 kHz to 1,600 kHz (selectable) |
| **Usable Sensitivity** | |
| Loop antenna | 300 µV/m / 600 µV/m** |
| External antenna | 30µV / 100 µV** |
| **Signal-to-Noise Ratio (MW/LW)** | 50 dB** (100mV / m) |
| **Selectivity (MW/LW)** | 25 dB (±10 kHz, ±9 kHz) /<br>32 dB (±9 kHz) ** |

## General

| | |
|---|---|
| **Power Requirements** | |
| Canada | AC 120V ∿, 60 Hz |
| Europe (except U.K.) | AC 230V ∿, 50 Hz |
| U.K. and Australia | AC 240V ∿, 50 Hz |
| Other Countries | AC 110V/127V/220V/240V ∿,<br>50/60 Hz |
| **Power Consumption** | |
| Canada | 210 watts, 290 VA |
| Europe (except U.K.) | 230 watts |
| U.K. and Australia | 560 watts |
| Other Countries | 220 watts |
| **Dimensions (W x H x D)** | 17-3/16 x 5 x 13-7/16 inches<br>435 x 126 x 341 mm |
| **Weight** | 21 lbs (9.2 kg) |

* Measured by JVC Audio Analysis System

** Measured at 1000 kHz or 999 kHz (MW), at 245 kHz (LW)

Designs & specifications subject to change without notice